

WO 97/30158

BBLON ET AL (703) 413-3000

DOCKET # 01390X PCT SHEET 1 OF 32

PCT/FR97/00290

09/125031

1/32

FIGURE 1A

	E	F	N	I	S	Q	H	Q	C	V	K	K	Q	C	P	E	N
Bac 19	<u>GGA</u>	<u>TTC</u>	AAC	ATC	TCG	CAG	CAC	CAA	TGC	GTG	AAA	AAA	CAA	TGT	CCC	GAG	AAC
PF 19																	
	AAC	ATT	TCA	CAA	CAC	CAA	TGC	GTA	AAA	AAA	CAA	TGT	CCA	GAA	AAT		
	S	G	C	F	R	H	L	D	E	R	E	E	C	K	C	L	L
Bac 19	TGT	GGC	TGT	TTC	AGA	CAC	TTG	GAC	GAG	AGA	GAG	GAG	TGT	AAA	TGT	CTG	CTG
PF 19																	
	TGT	GGA	TGT	TTC	AGA	CAT	TTA	GAT	GAA	AGA	GAA	GAA	TGT	AAA	TGT	TTA	TTA
	N	Y	K	Q	E	G	D	K	C	V	E	N	P	N	P	T	C
Bac 19	AAC	TAC	AAA	CAG	GAG	GGC	GAC	AAG	TGC	GTG	GAG	AAC	CCC	AAC	CCG	ACC	TGT
PF 19																	
	AAT	TAC	AAA	CAA	GAA	GGT	GAT	AAA	TGT	GTT	GAA	AAT	DCA	AAT	CCT	ACT	TGT
	N	E	N	N	G	G	C	D	A	D	A	K	C	T	E	E	D
Bac 19	AAC	GAG	AAC	AAC	GGC	GGC	TGT	GAC	GCA	GAC	GCC	AAA	TGC	ACC	GAG	GAG	GAC
PF 19																	
	AAC	GAA	AAT	AAT	GGT	GGA	TGT	GAT	GCA	GAT	GCC	AAA	TGT	ACC	GAA	GAA	GAT
	S	G	S	N	G	K	K	I	T	C	E	C	T	K	P	D	S
Bac 19	TCG	GGC	AGC	AAC	GGC	AAG	AAA	ATC	ACG	TGT	GAG	TGT	ACC	AAA	CCC	GAC	TCG
PF 19																	
	TCA	GGT	AGC	AAC	GGA	AAG	AAA	ATC	ACA	TGT	GAA	TGT	ACT	AAA	CCT	GAT	TGT
	Y	P	L	F	D	G	I	F	C	S	.	.					
Bac 19	TAC	CCG	CTG	TTC	GAC	GGC	ATC	TTC	TGC	AGC	TAA	TAA					
PF 19																	
	TAT	CCA	CTT	TTC	GAT	GGT	ATT	TTC	TGC	AGT							

DOCKET # 01390XPG SHEET 2 OF 2

PCT/FR97/00290

09/125031

2 / 32

FIGURE 13

Sise Eco RI

PF 19 AAC ATT TCA CAA CAC CAA TGC GTA AAA AAA CAA TGT CCA GAA AAT

	S	G	C	F	R	H	L	D	E	R	E	E	C	K	C	L	L
Bac 19	TGT	GGC	TGT	TTC	AGA	CAC	TTG	GAC	GAG	AGA	GAG	GAG	TGT	AAA	TGT	CTG	CTG
PF 19	TGT	GGA	TGT	TTC	AGA	CAT	TTA	GAT	GAA	AGA	GAA	GAA	TGT	AAA	TGT	TTA	TTA

	N	Y	K	Q	E	G	D	K	C	V	E	N	P	N	P	T	C
Bac 19	AAC	TAC	AAA	CAG	GAG	GCC	GAC	AAG	TGC	GTG	GAG	AAC	CCC	AAC	CCG	ACC	TGT
PF 19	AAT	TAC	AAA	CAA	GAA	GGT	GAT	AAA	TGT	GTT	GAA	AAT	CCA	AAT	GCT	ACT	TGT

	N	E	N	N	G	G	C	D	A	D	A	K	C	T	E	E	D
Bac 19	AAC	GAG	AAC	AAC	GGC	GGC	TGT	GAC	GCA	GAC	GCC	AAA	TOC	ACC	GAG	GAG	GAC
PF 19	AAC	GAA	AAT	AAT	GGT	GGA	TGT	GAT	GCA	GAT	GCC	AAA	TGT	ACC	GAA	GAA	GAT

	S	G	S	N	G	K	K	I	T	C	E	C	T	K	P	D	S
Bag 19	TGG	GGC	AGC	AAC	GGC	AAG	AAA	ATC	ACG	TGT	GAG	TGT	ACC	AAA	CCC	GAC	TGG
PF 19	TCA	GGT	AGC	AAC	GGA	AAG	AAA	ATC	ACA	TGT	GAA	TGT	ACT	AAA	CCT	GAT	TCT

	Y	P	L	F	D	G	I	F	C	S	S	S	N	F	L	G	I
BAE 15	TAC	CCG	CTG	TTC	GAC	GGC	ATC	TTC	TGC	AGC	TCC	TCT	AAC	TTC	TTG	GGC	ATC
PF 19	TAT	CCA	CTT	TTC	GAT	GGT	ATT	TTC	TGC	AGT	TCC	TCT	AAC	TTC	TTA	GGA	ATA

	S	F	L	L	I	L	M	L	I	L	Y	S	F	I	*	*
Bac 19	TCG	TTC	TTG	TTG	ATC	CTC	ATG	TTG	ATC	TTG	TAC	AGC	TTG	ATT	TAA	TAA
											TAC	AGT				
PF 19	TCA	TTC	TTA	TTA	ATA	CTC	ATG	TTA	ATA	TTA	TAC	AGT	TTG	ATT		

SECRET # 01390XP SHEET 5 OF 2

PCT/FR97/00290

09/125031

3 / 32

ATG M	AAG K	GCG A	CTA L	CTC L	TTT F	TTG L	TTC F	TCT S	TTC F	ATT I	TTT F	TTC F	GTT V	ACC T	AAA K	TGT C
CAA Q	TGT C	GAA E	ACA T	GAA E	AGT S	TAT Y	AAG K	CAG Q	CTT L	GTA V	GCC A	AAC N	GTG V	GAC D	GAA E	TTC F
AAC N	ATC I	TCG S	CAG Q	CAC H	CAA Q	TGC C	GTG V	AAA K	AAA K	CAA Q	TGT C	CCC P	GAG E	AAC N	TCT S	GGC G
TGT C	TTC F	AGA R	CAC H	TTG L	GAC D	GAG E	AGA R	GAG E	GAG E	TGT C	AAA K	TGT C	CTG L	CTG L	AAC N	TAC Y
AAA K	CAG Q	GAG E	GCG G	GAC D	AAG K	TGC C	GTG V	GAG E	AAC N	CCC P	AAC N	CCG P	ACC T	TGT C	AAC N	GAG E
AAC N	AAC N	GCG G	GCG G	TGT C	GAC D	GCA A	GAC D	GCC A	AAA K	TGC C	ACC T	GAG E	GAG E	GAC D	TCG S	GCG G
AGC S	AAC N	GCG G	AAG K	AAA K	ATC I	ACG T	TGT C	GAG E	TGT C	ACC T	AAA K	CCC P	GAC D	TCG S	TAC Y	CCG P
CTG L	TTC F	GAC D	GCG G	ATC I	TTC F	TGC C	AGC S	TAA *	TAA *							

FIGURE 1C

[illegible]

OBLON ET AL (703) 413-3000

DOCKET # 01390XPC SHEET 4 OF 32

WO 97/30158

PCT/FR97/00290

09/125031

4/32

GAA	ACA	GAA	AGT	TAT	AAG	CAG	CTT	GTA	GCC	AAC	GTG	GAC	GAA	TTC
E	T	E	S	Y	K	Q	L	V	A	N	V	D	E	F
AAC	ATC	TCG	CAG	CAC	CAA	TGC	GTG	AAA	AAA	CAA	TGT	CCC	GAG	AAC
N	I	S	Q	H	Q	C	V	K	K	Q	C	P	E	N
TGT	TTC	AGA	CAC	TTG	GAC	GAG	AGA	GAG	GAG	TGT	AAA	TGT	CTG	CTG
C	F	R	H	L	D	E	R	E	E	C	K	C	L	L
AAA	CAG	GAG	GGC	GAC	AAG	TGC	GTG	GAG	AAC	CCC	AAC	CCG	ACC	TGT
K	Q	E	G	D	K	C	V	E	N	P	N	P	T	C
AAC	AAC	GGC	GGC	TGT	GAC	GCA	GAC	GCC	AAA	TGC	ACC	GAG	GAG	GAC
N	N	G	G	C	D	A	D	A	K	C	T	E	E	D
AGC	AAC	GGC	AAG	AAA	ATC	ACG	TGT	GAG	TGT	ACC	AAA	CCC	GAC	TCG
S	N	G	K	K	I	T	C	E	C	T	K	P	D	S
CTG	TTC	GAC	GGC	ATC	TTC	TGC	AGC	TAA	TAA					
L	F	D	G	I	F	C	S	*	*					

FIGURE 1D

WO 97/30158

OBLON ET AL (703) 413-3000

DOCKET # 01390XPC SHEET 532 OF 32

PCT/FR97/00290

09/125031

5/32

660760-TECHNICAL

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FIGURE 2

OLON ET AL (703) 413-3000

DOCKET # 01390XPC SHEET 32

WO 97/30158

6/32

PCI/FR97/00290

09/125031

MSP1p19S

V

C

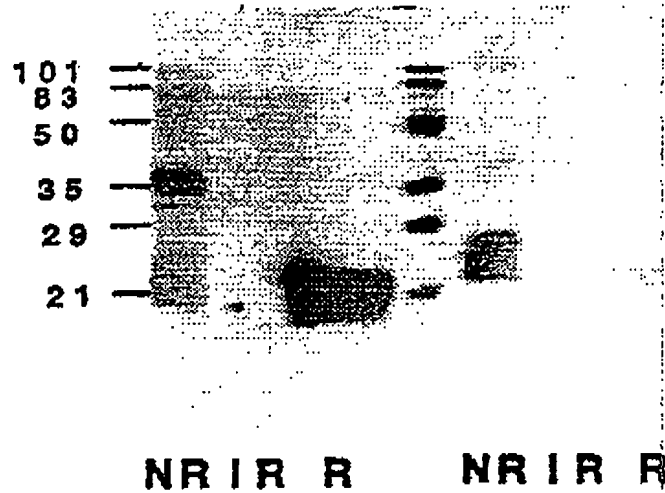


FIGURE 2B

WO 97/30158

OBLON ET AL (703) 413-3000

DOCKET # 01390X P1 SHEET 7 OF 32

PCT/FR97/00290

7/32

09/125031

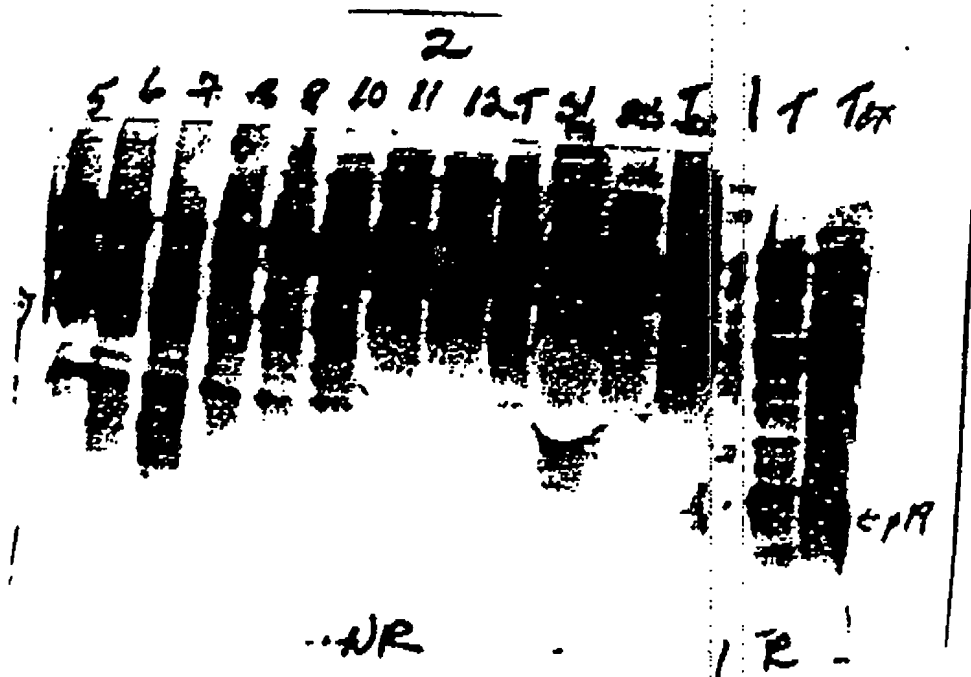


FIGURE 3

WO 97/30158

6607207605760

ELISA INHIBITION BY P. VIVAX MSP-1 P42 AND P19 ANTIGENS

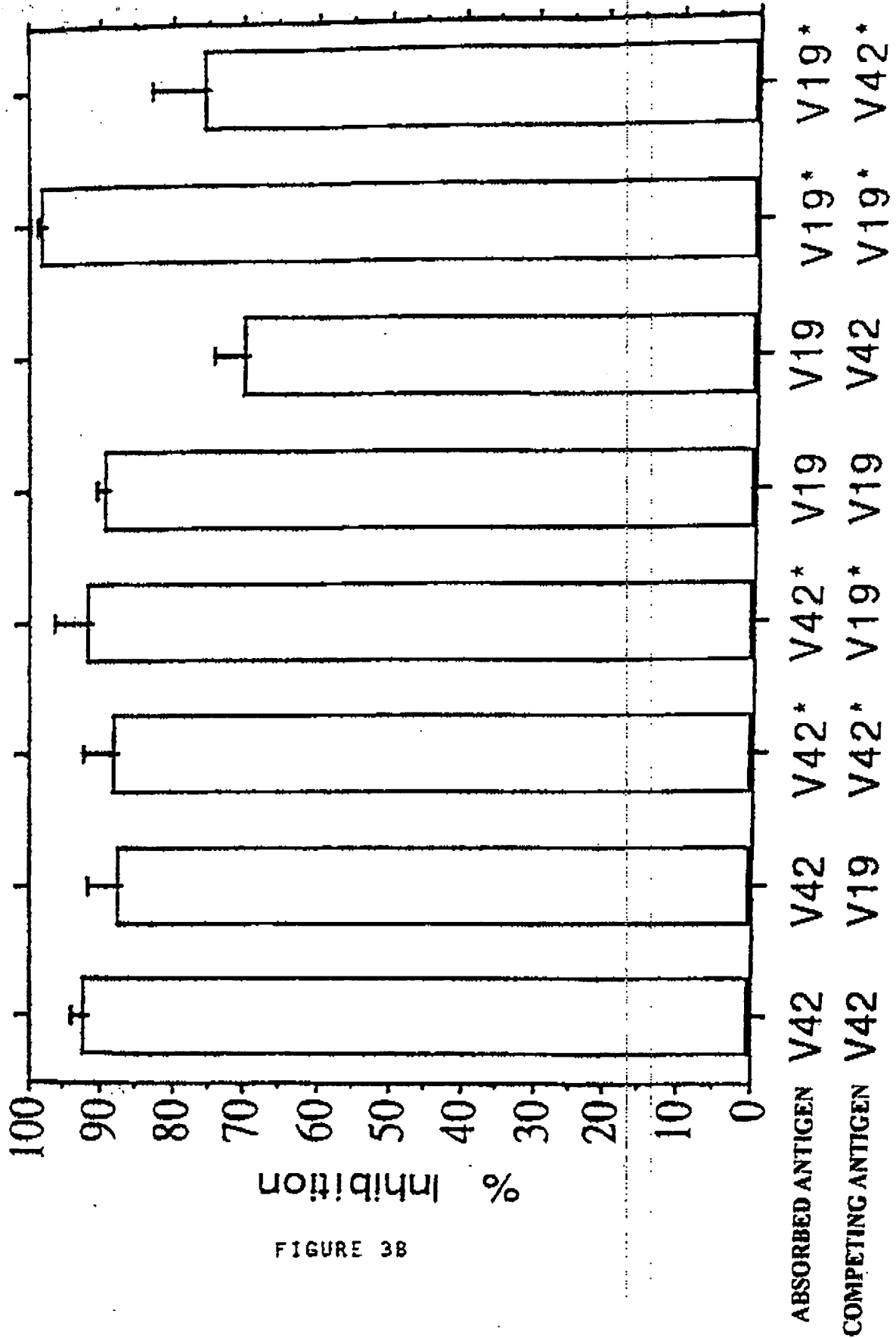


FIGURE 38

4

42

Region 1

REFINING

194

REGION III

131

REGION IV

15



VIVAX (Belom): VIVAX (Sat.1)

CYNOMOLGI: VIVAX

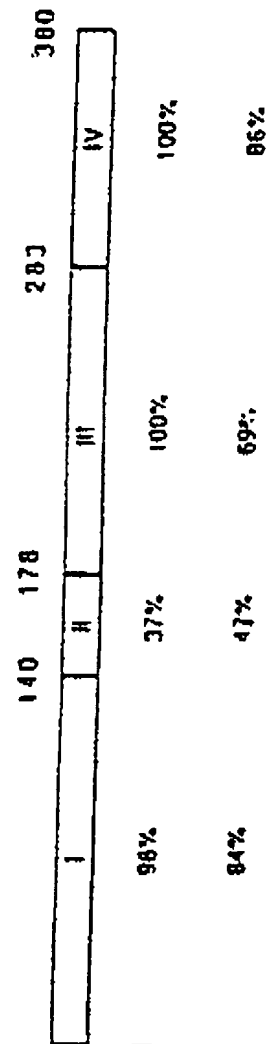


FIGURE 4

WO 97/30158

10/32

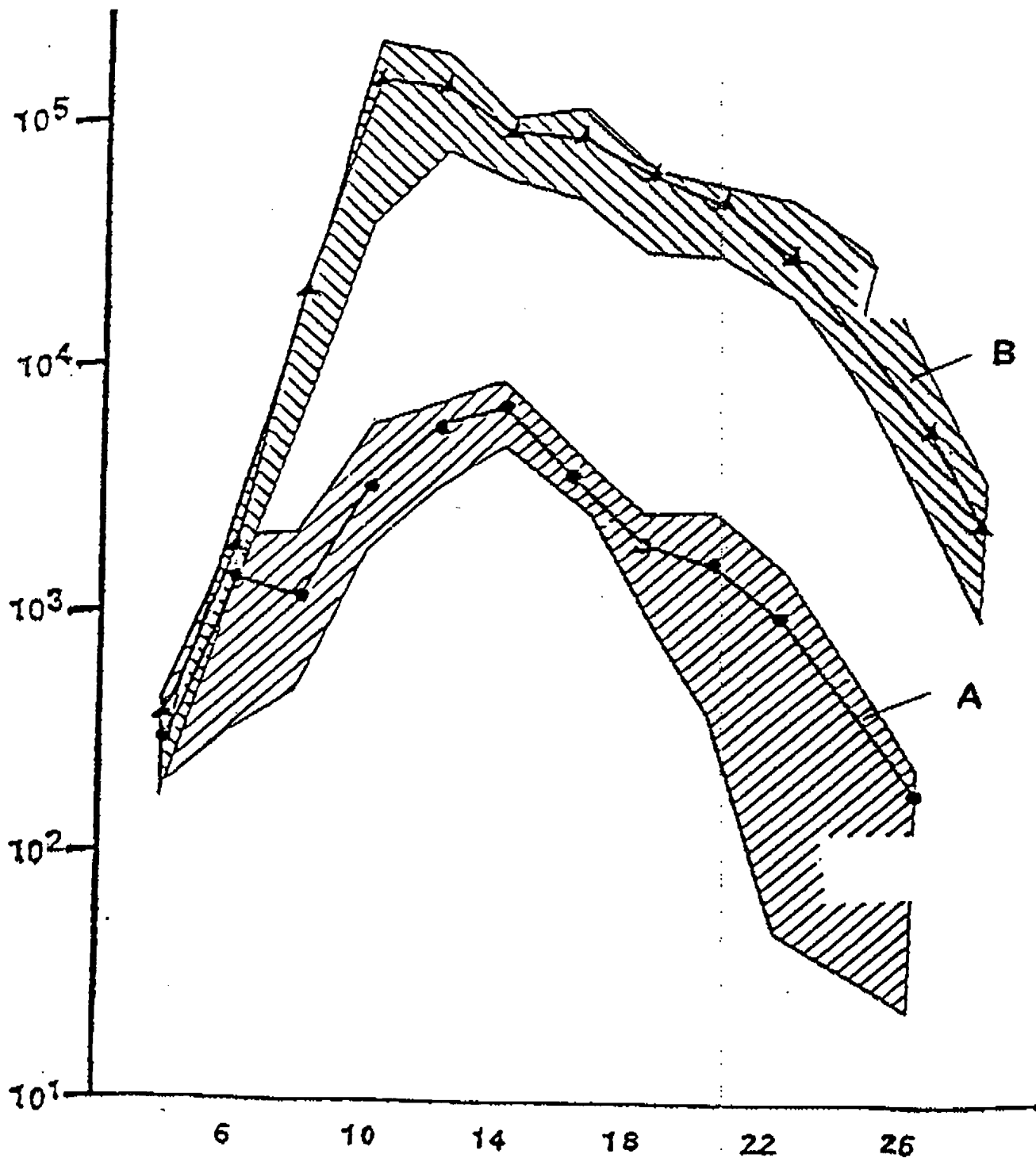


FIGURE 5

09/125031
 PCT/FR97/00290

WO 97/30158

11/32

09/125031

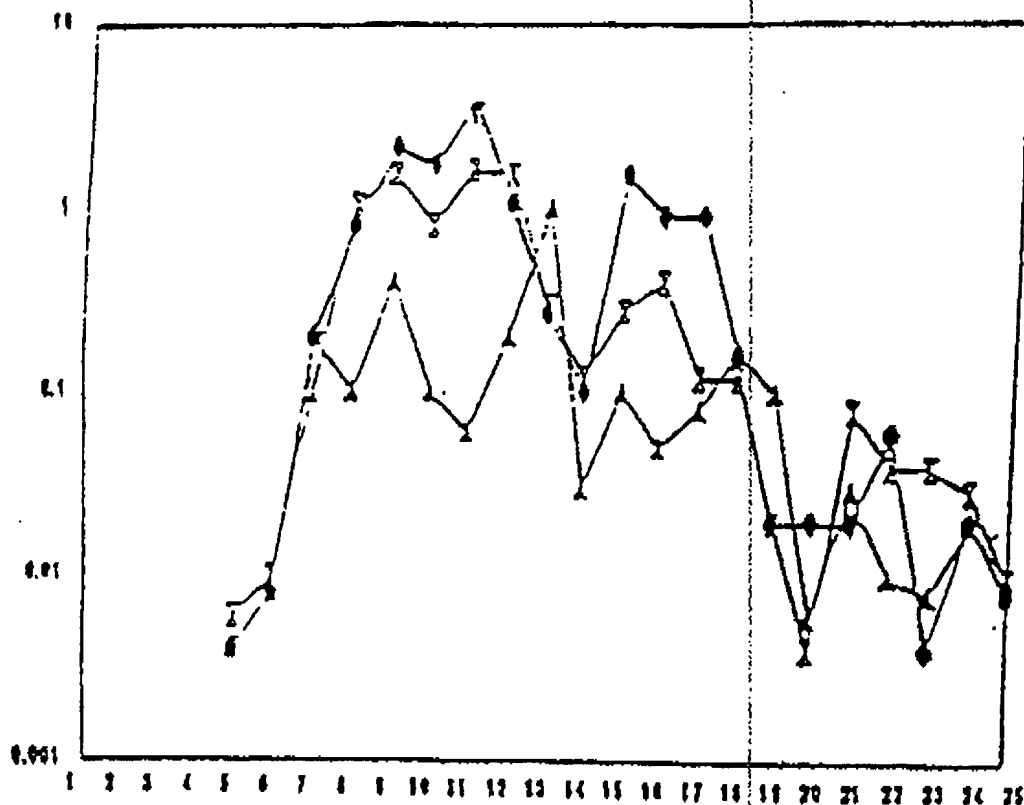


FIGURE 6A

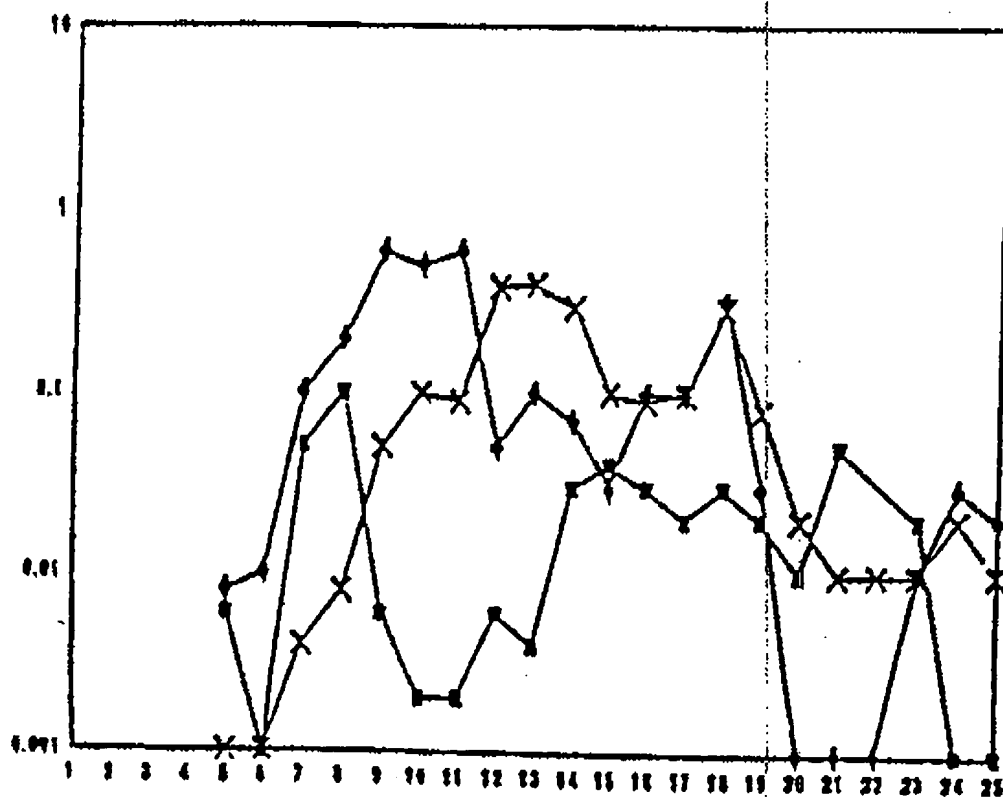


FIGURE 6B

663760" P0001760

BLON ET AL (703) 413-3000

DOCKET # 01390XPC SHEET 12052

WO 97/30158

12/32

PCT/FR97/00290

09/125031

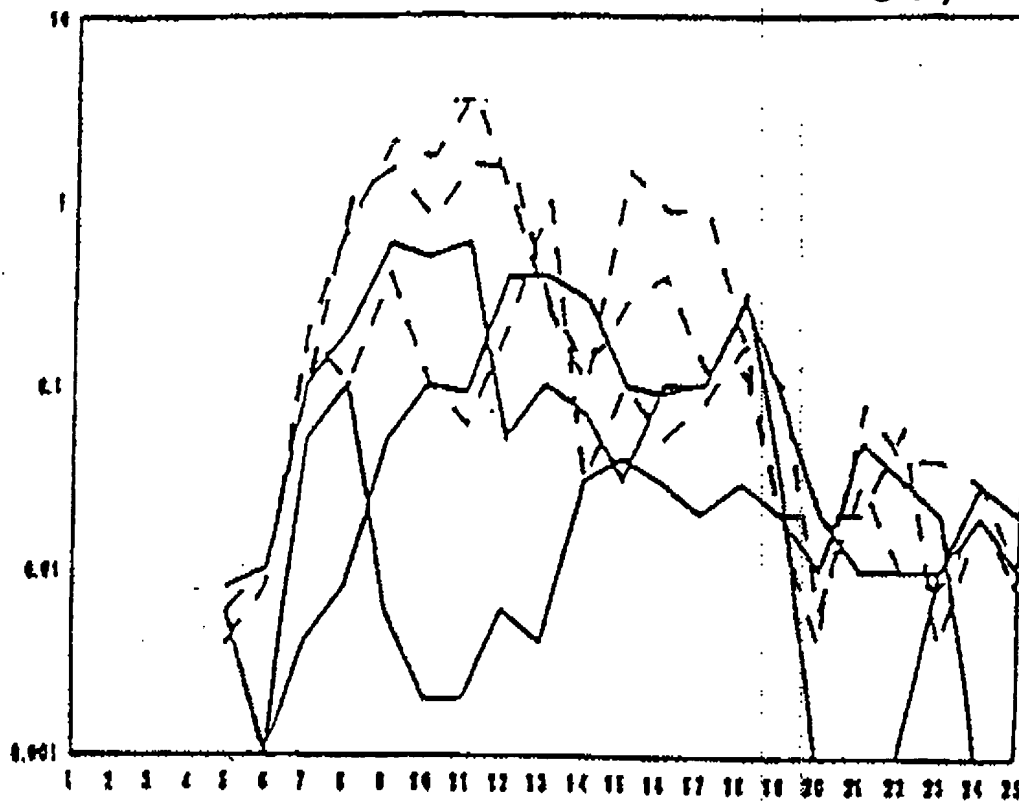


FIGURE 6C

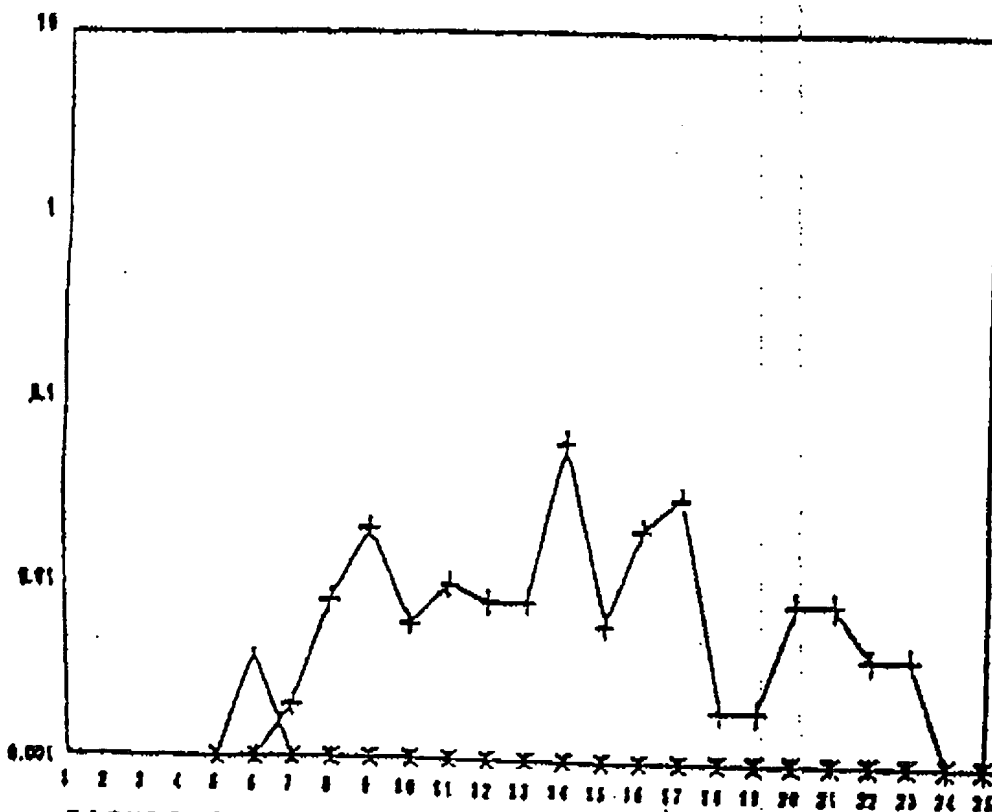


FIGURE 6D

60072072000000

BLON ET AL (703) 413-3000

WO 97/30158

DOCKET # 21390XPC SHEET 13/32

PCT/FR97/00290

09/125031

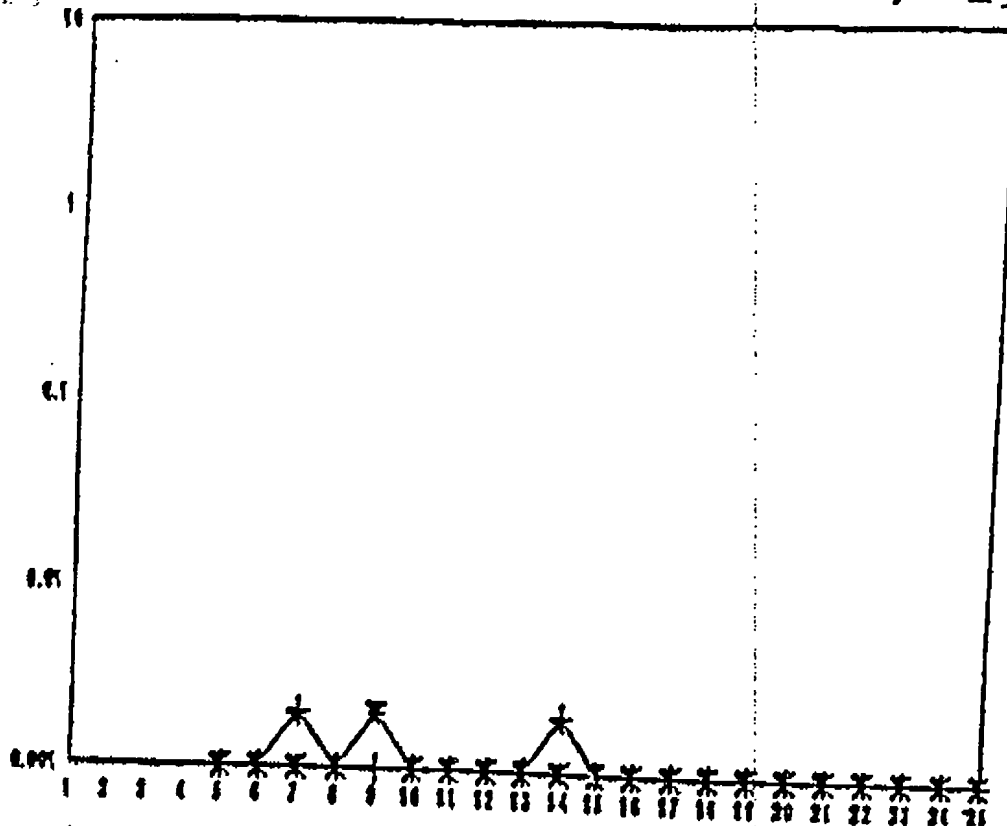


FIGURE 6E

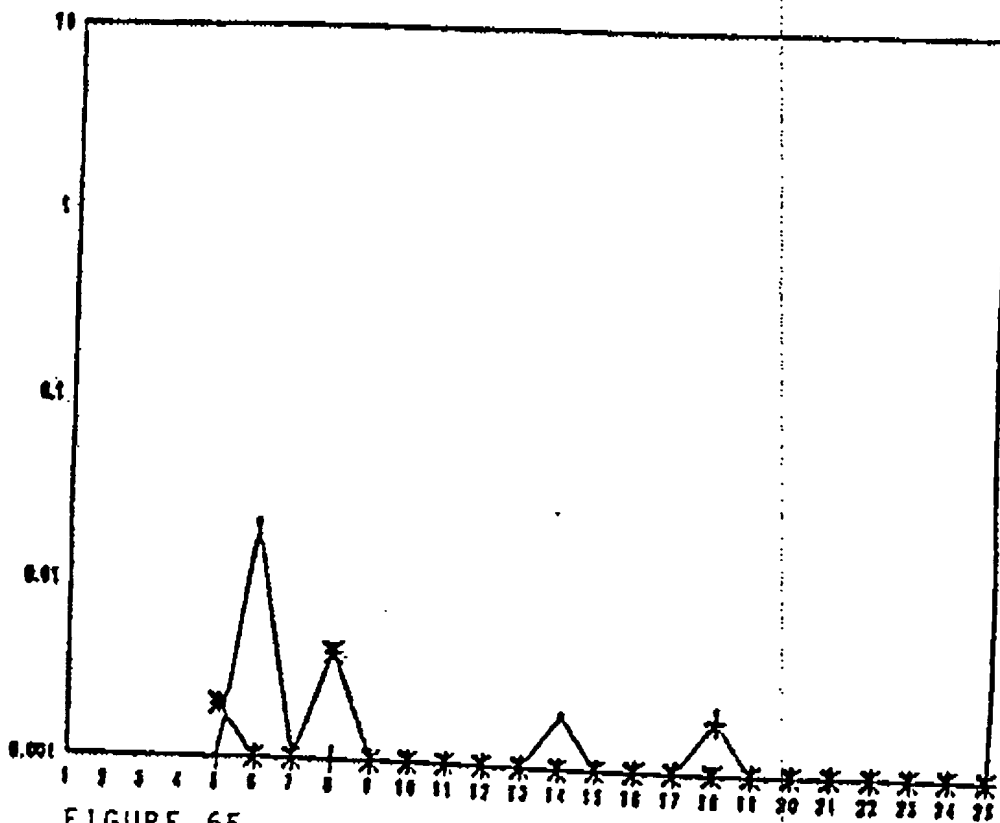


FIGURE 6F

PCT/FR97/00290

09/125031

Vaccination test: recombinant MSP-1 (p42 and p19) from *Plasmodium cynomolgi* in the Moroccan cynomolgus monkey

[illegible]

— = Absence of parasites in 400 microscopic fields

ON ET AL (703) 413-3000

DOCKET # 013901P4 SHEET 15 OF 32

WO 97/30158

15/32

09/125031
PCT/FR97/00290

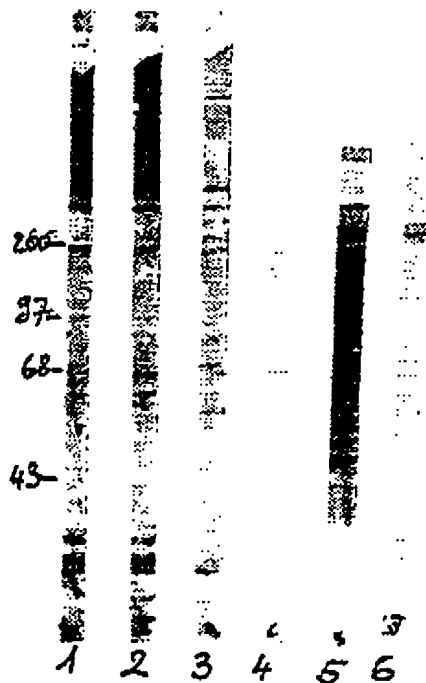
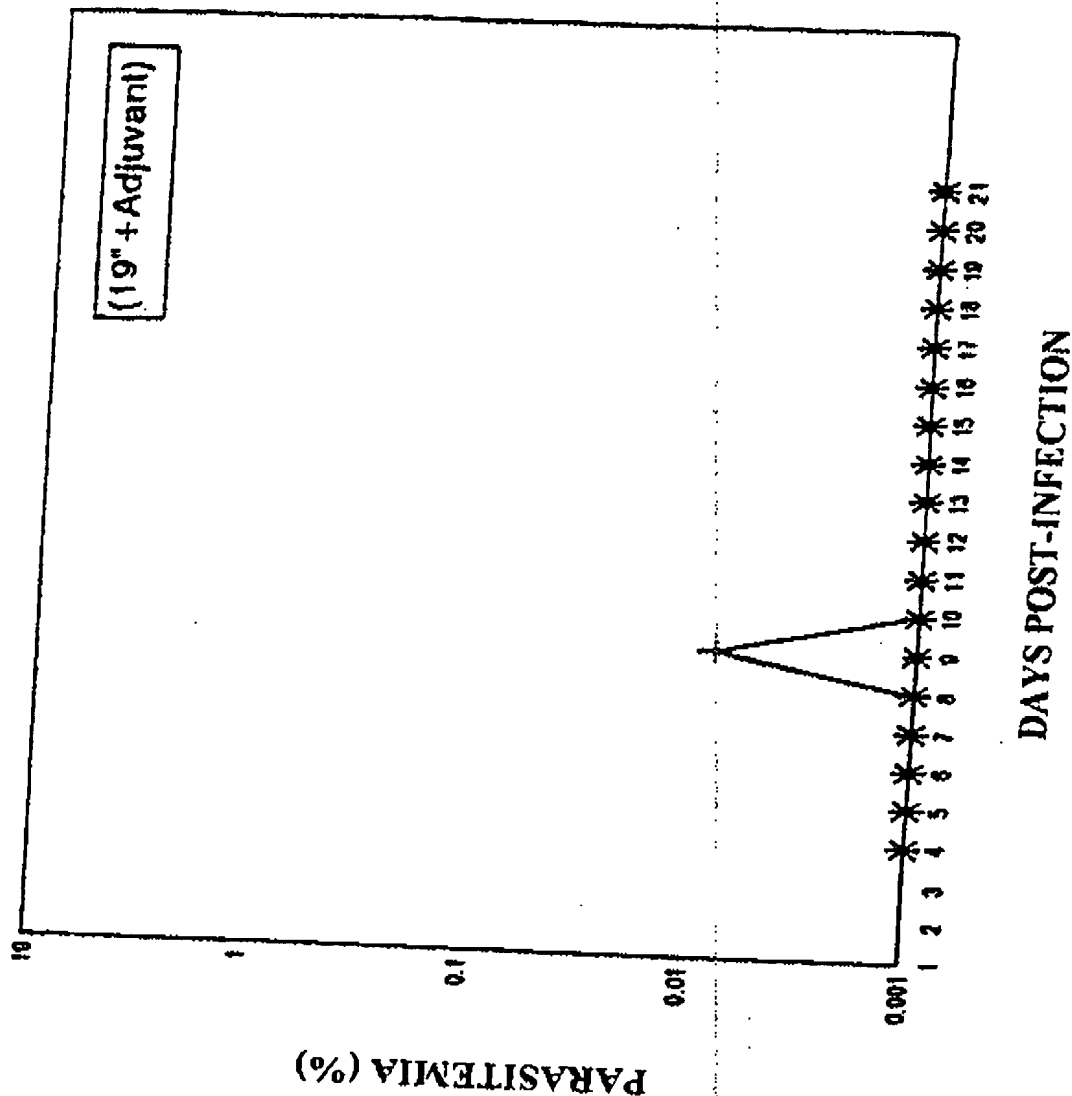


FIGURE 7

Vaccination test: recombinant MSP-1 (p19) of *Plasmodium cynomolgi* in the *Macaca sinica* toque
macaque; second challenge infection

FIGURE 8A



WO 97/30158

PCT/FR97/00290

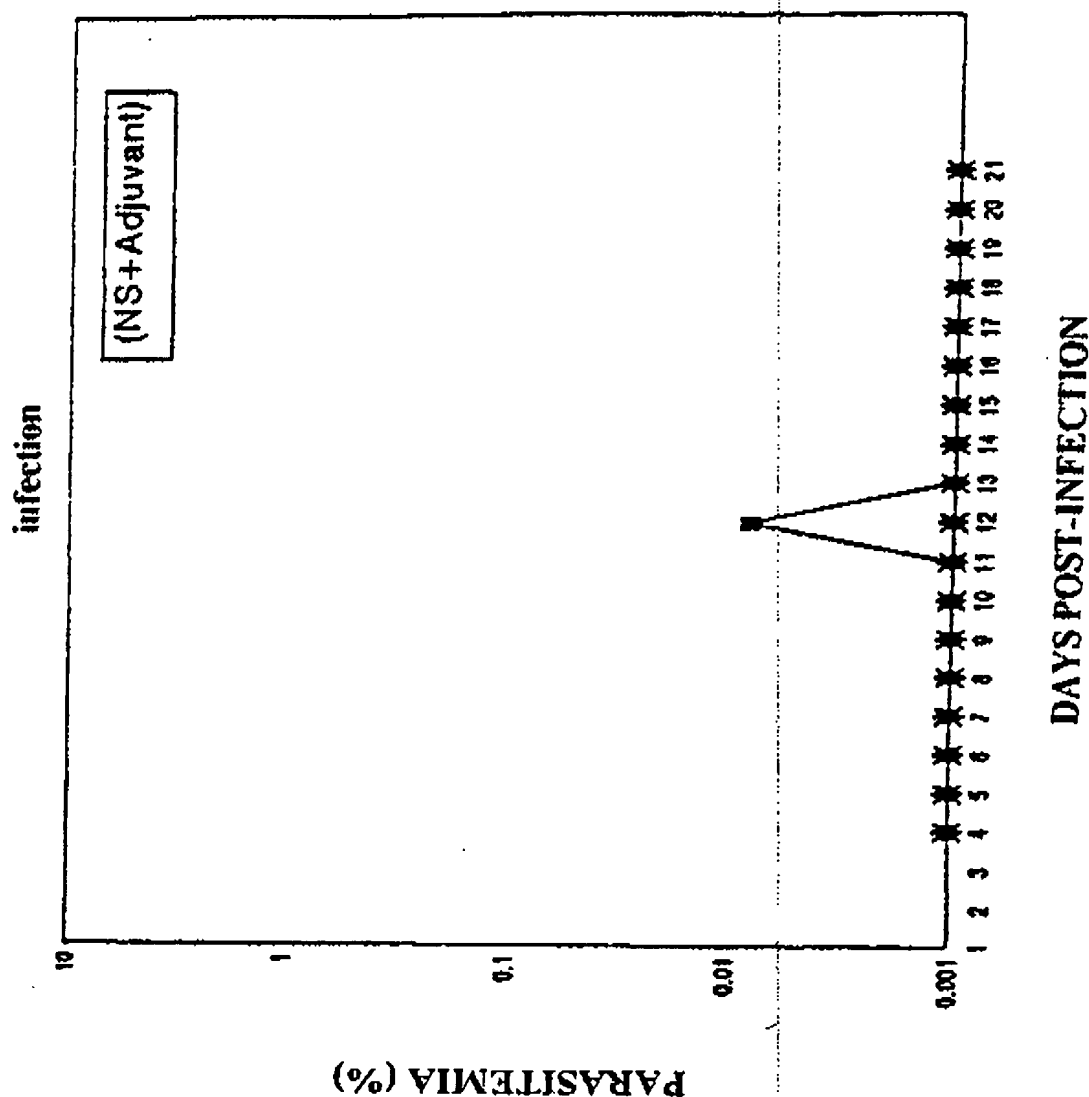
18/32

09/125031

FIGURE 8B

Vaccination test: recombinant MSP-1 (p19) of *Plasmodium*

cynomolgi in the *Macaca sinica* toque macaque; second challenge



WO 97/30158

IN ET AL (703) 413-3000

DOCKET # 0400139 0X04 SHEET 19 OF 32

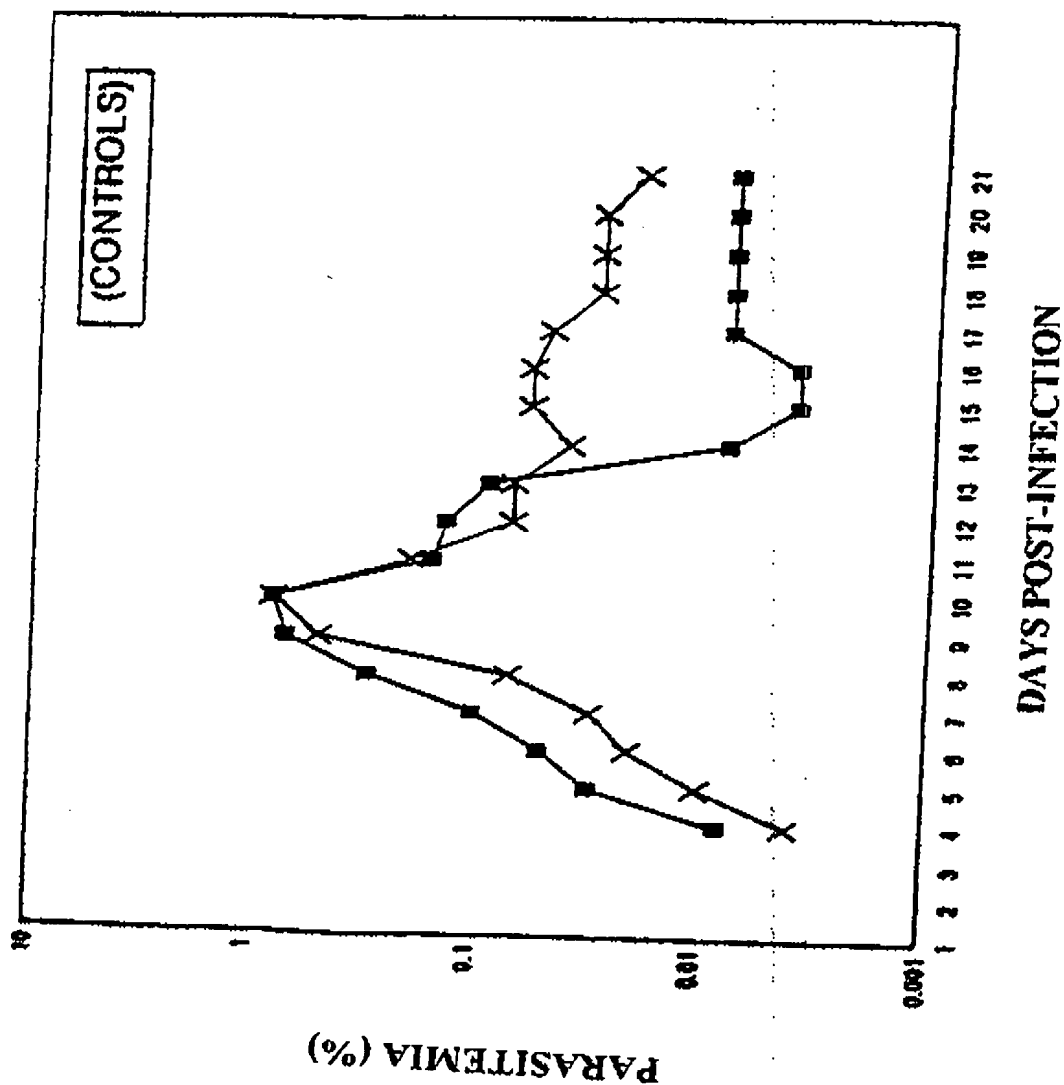
PCT/FR97/00290

19/32

09/125031

FIGURE 8C

660760-TECH-2760
Vaccination test: recombinant MSP-1 (p19) of *Plasmodium cynomolgi* in the *Macaca sinica* toque macaque; second challenge infection



20/32

Vaccination test: recombinant MSP-1 (p19) of *Plasmodium cynomolgi* in the*Macaca sinica* toque macaque: second challenge infection

Year	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
Month	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Days post-infection	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Days after challenge	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Vaccination																		
p19																		
T 426	-	-	-	-	-	.008	-	-	-	-	-	-	-	-	-	-	-	-
T 427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T 429	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controls																		
Physiological water																		
FCA/FLA																		
T 436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T 425	-	-	-	-	-	-	-	-	.008	-	-	-	-	-	-	-	-	-
T 436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Controls																		
Non vaccinated																		
T 448	.008	.03	.05	0.1	0.3	0.7	0.8	.16	.14	.09	.008	.004	.004	.008	.008	.008	.008	.008
T 449	.004	.01	.02	.03	0.07	0.5	0.8	0.2	.07	.07	.04	.06	.06	.05	.03	.03	.03	.02

- = Absence of parasites in 400 microscopic fields

FIGURE 8D

WO 97/30158

PCT/FR97/00290

09/125031

21/32

FIGURE 9A

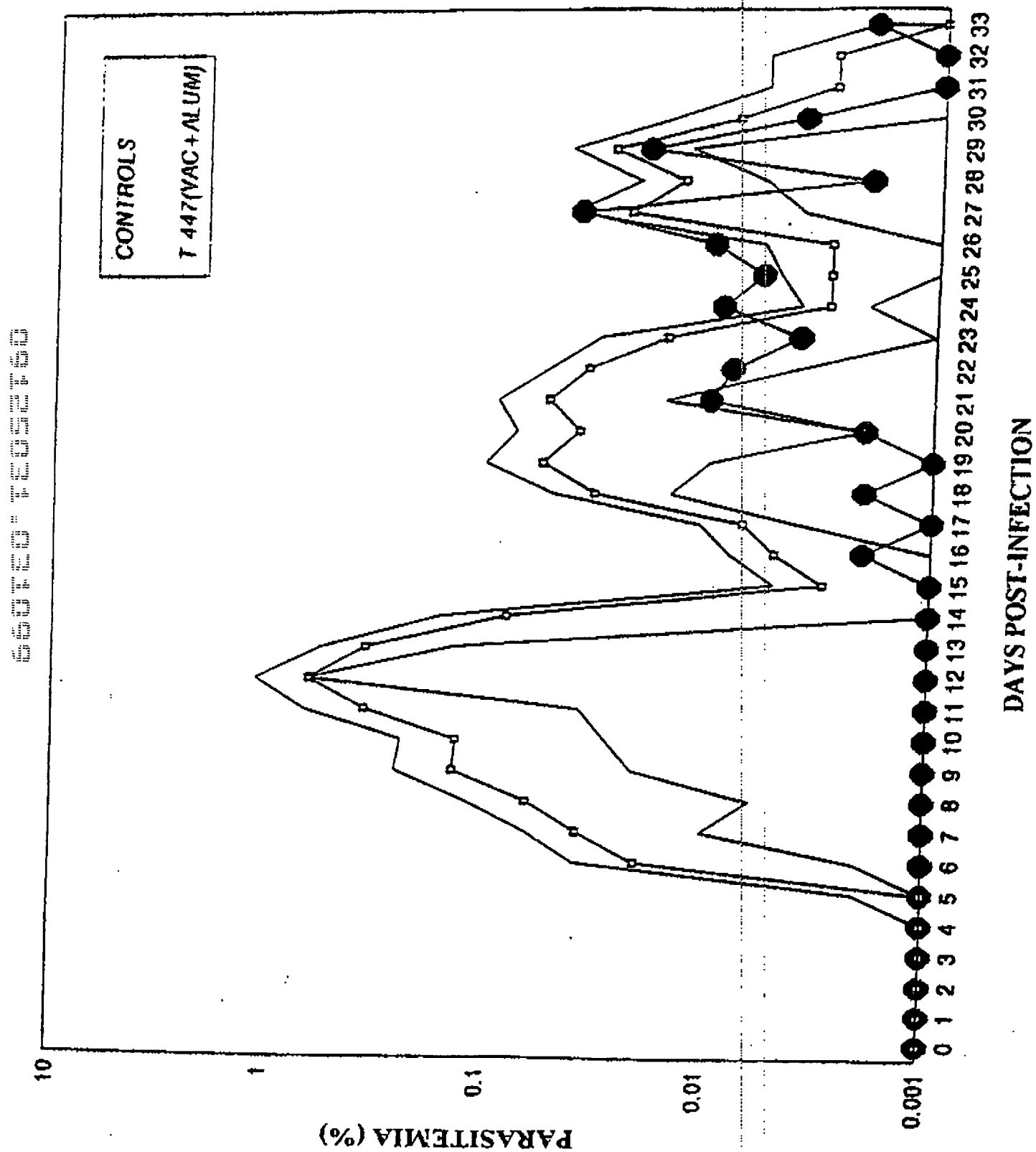
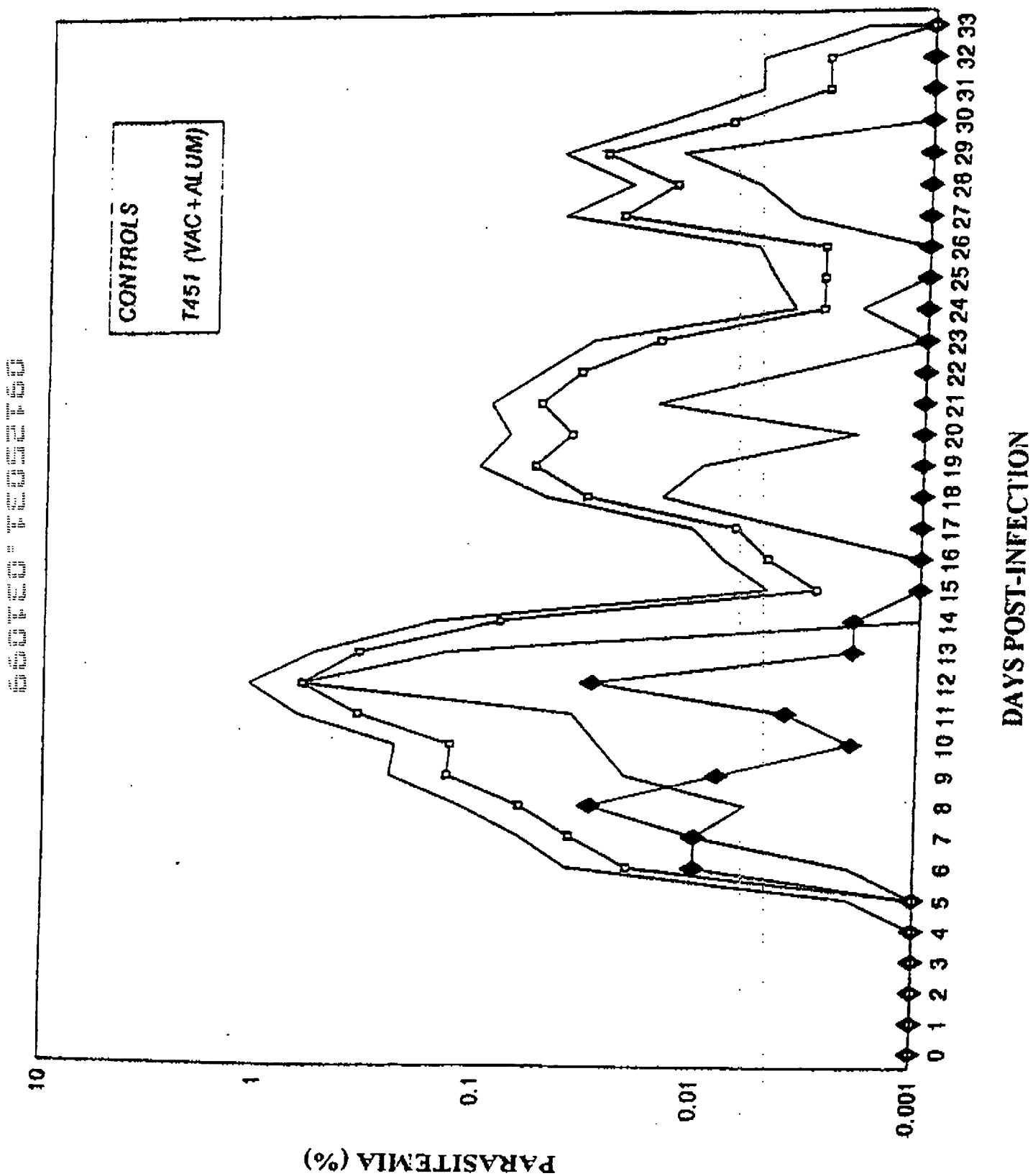


FIGURE 9B



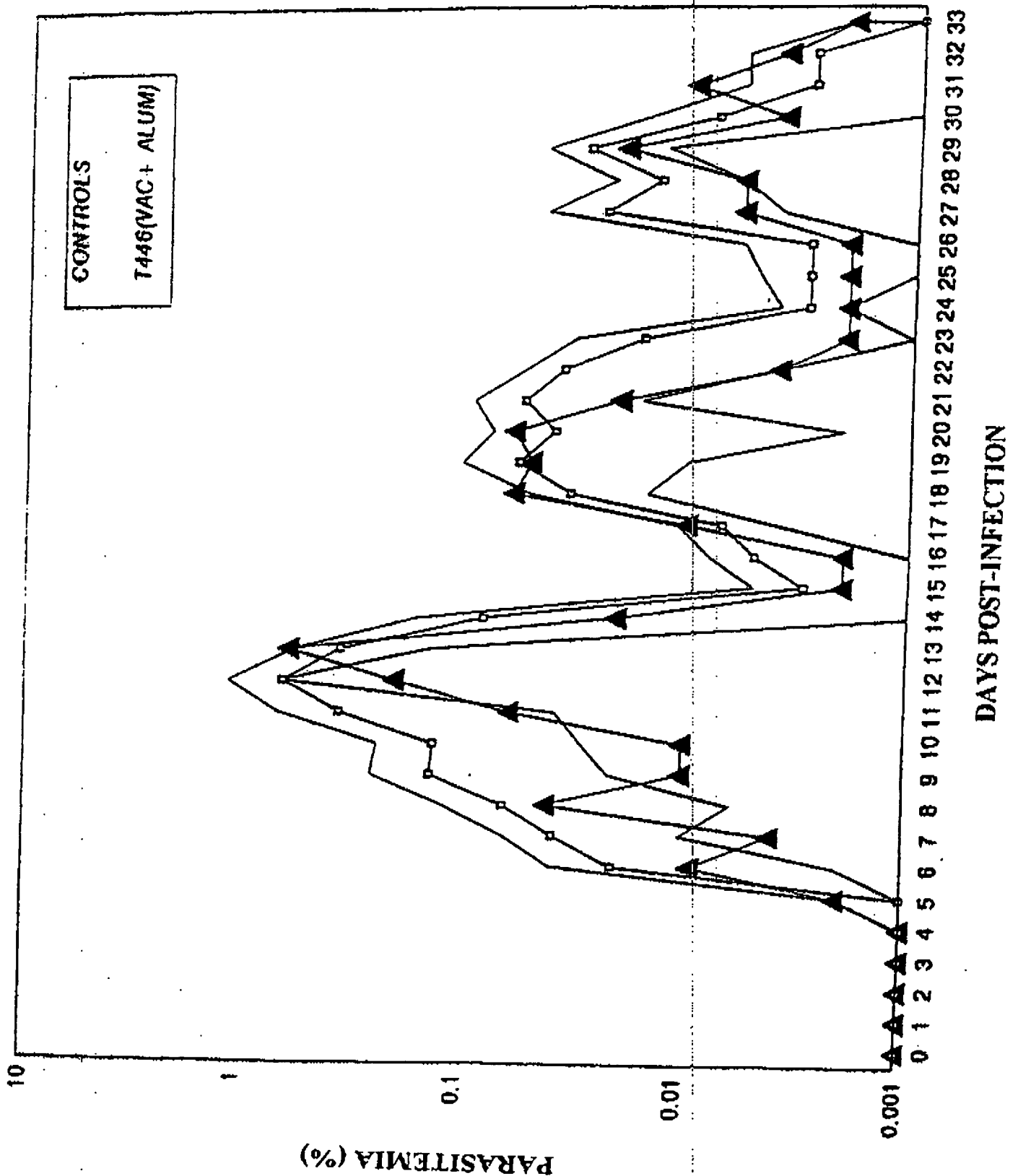
WO 97/30158

PCT/FR97/00290

09/125031

23/32

FIGURE 9C



BLON ET AL (703) 413-3000

DOCKET # 0139 XP SHEET 24/32

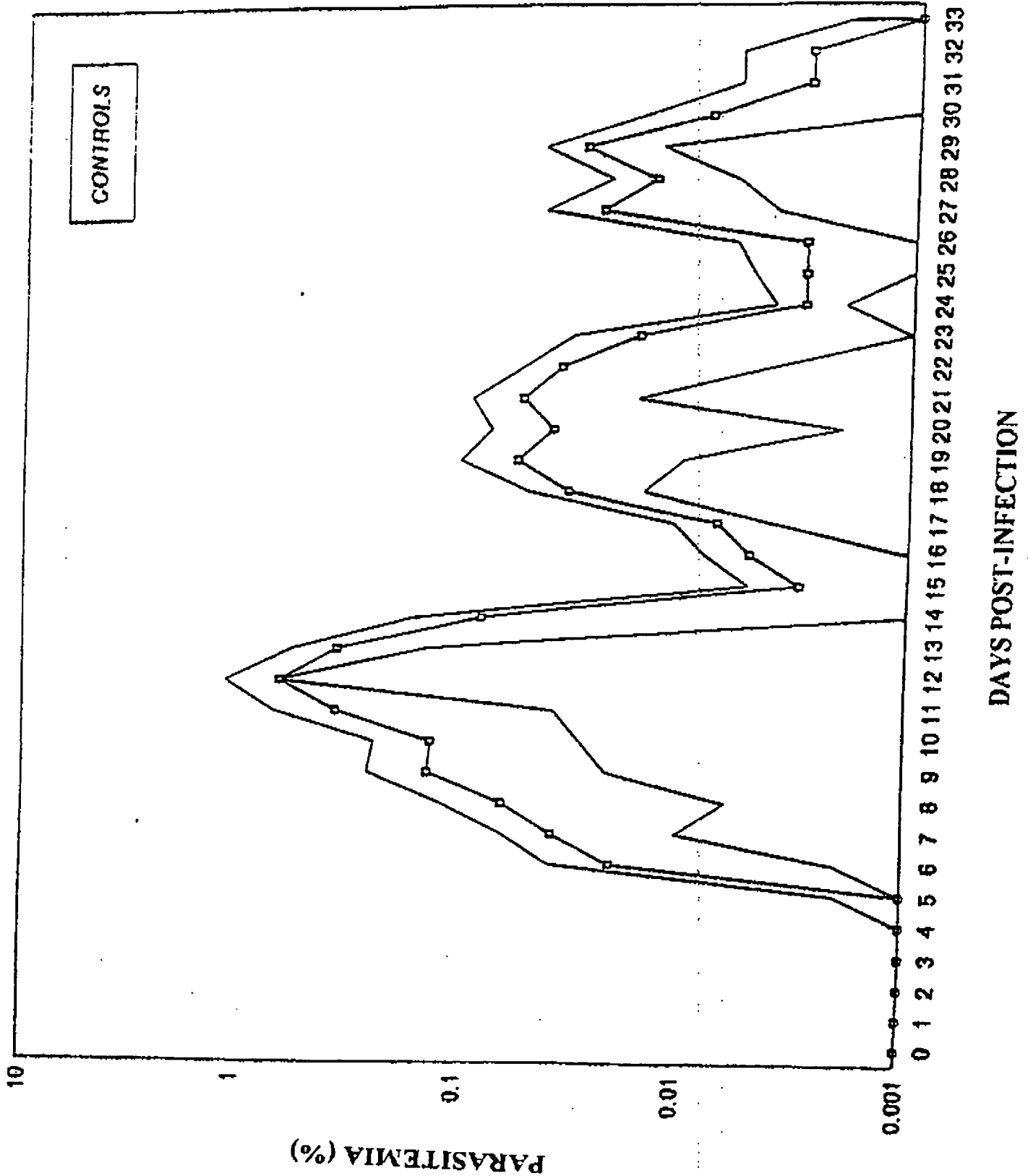
09/125031

PCT/FR97/00290

WO 97/30158

24/32

FIGURE 9D



09/125031
PCT/FR97/00290

Cynology in alium

[illegible]

FIGURE 9E

— negative for parasites in 400 microscopic fields

WO 97/30158

PCT/FR97/00290

09/125031

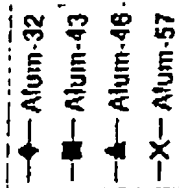
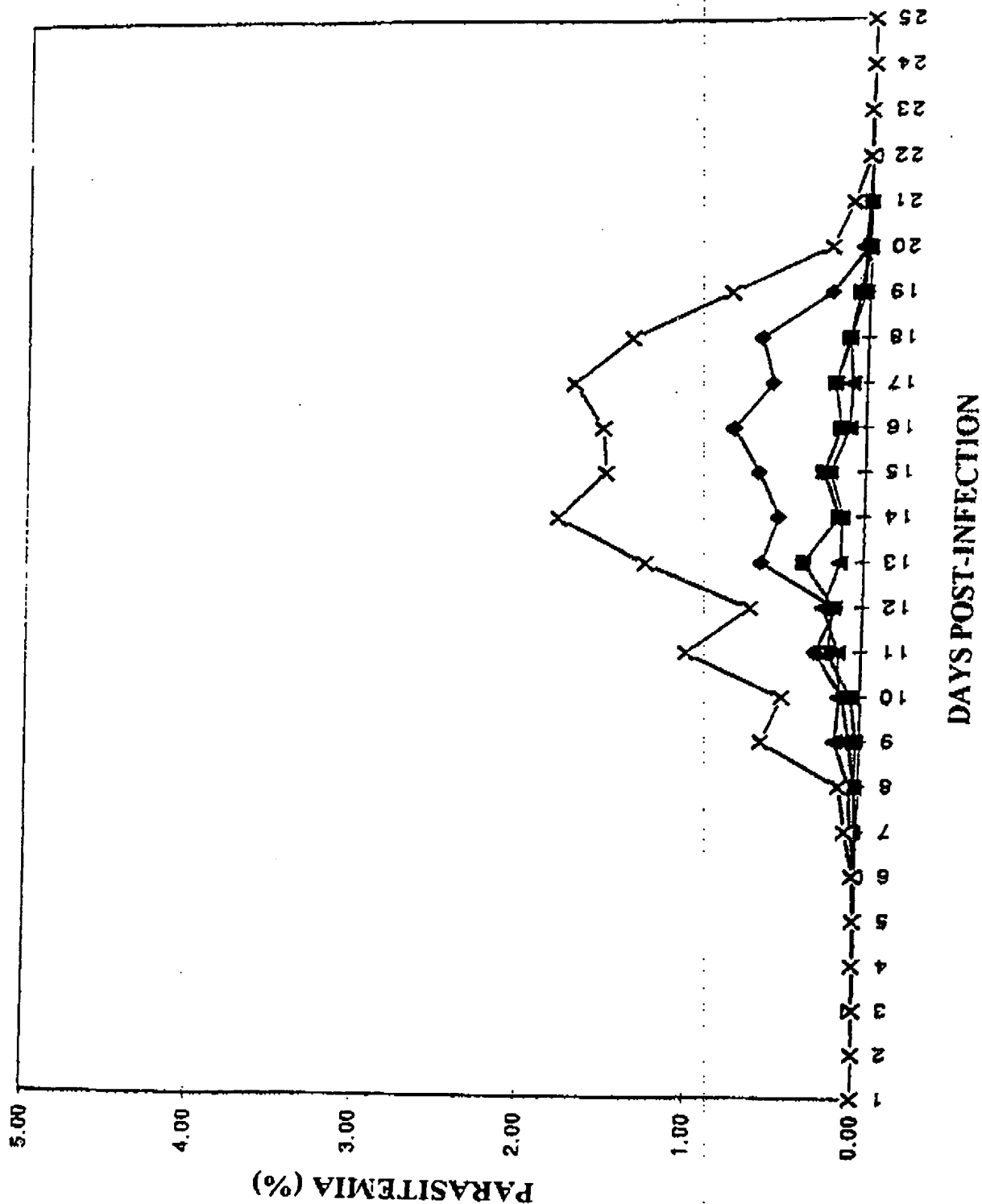


FIGURE 10A

PLASMODIUM FALCIPARUM VACCINATION TEST IN SAIMIRI
SCIUREUS SQUIRREL MONKEY
MSP-1 p19 VACCINATION WITH ALUM



WO 97/50158

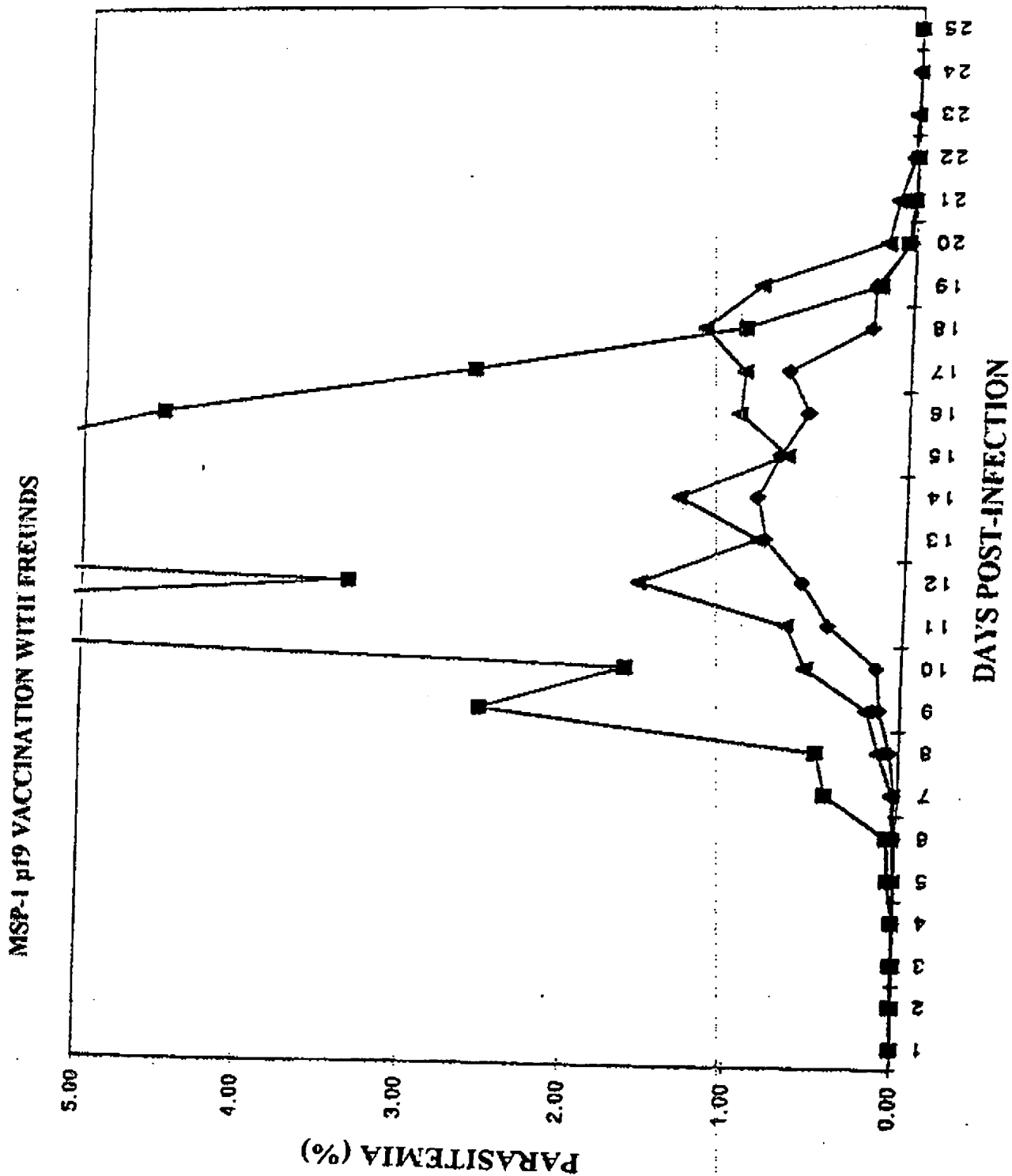
27/32

PCT/FR97/00290

09/125031

◆ Freund-48
■ Freund-66
▲ Freund-69

FIGURE 10B



WO 97/30158

28/32

PCT/FR97/00290

09/125031

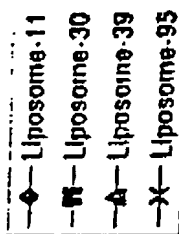
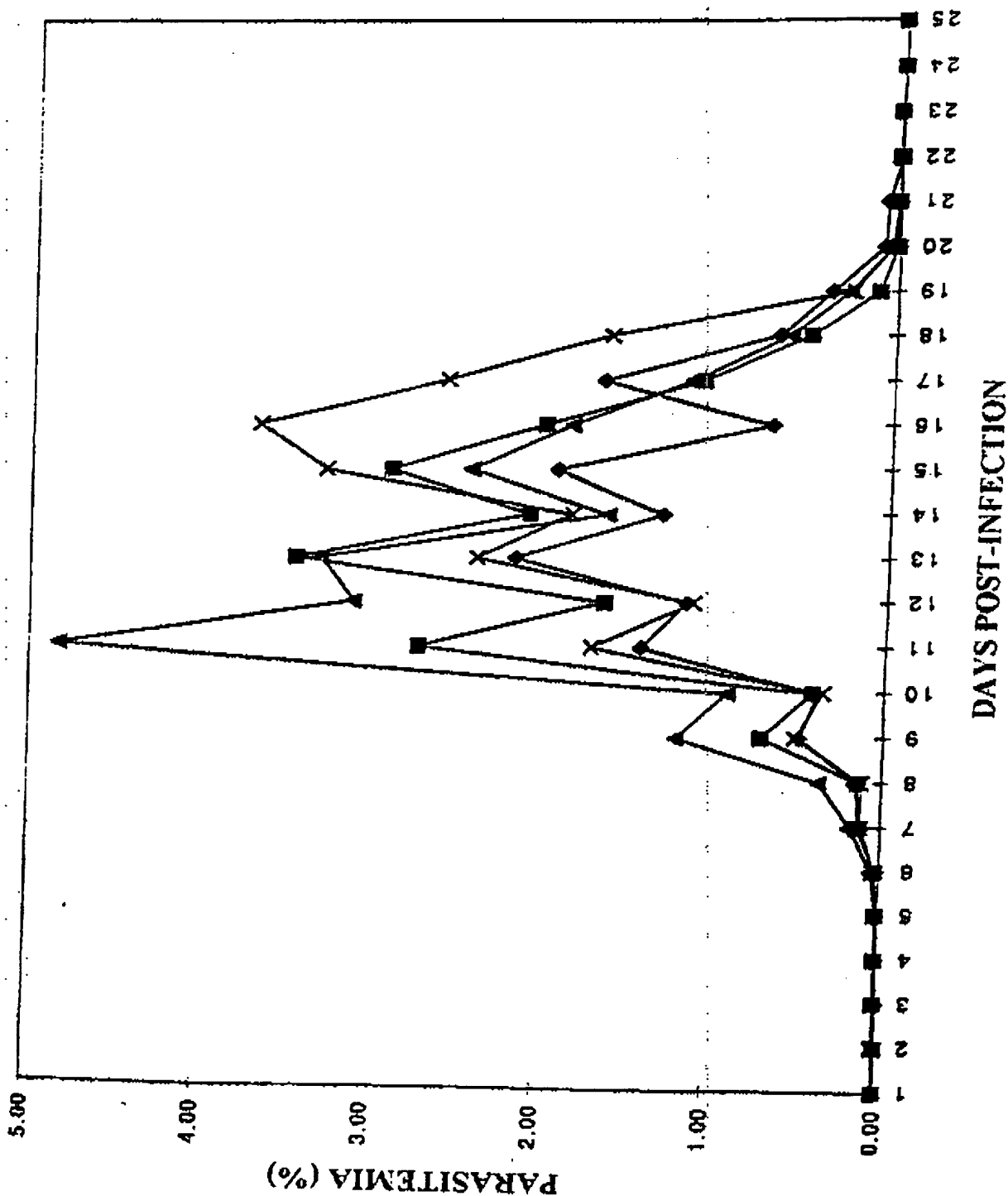


FIGURE 10C

PLASMODIUM FALCIPARUM VACCINATION TEST IN SAIMIRI
SCIENCE SQUIRREL MONKEY

MSP-1 p19 VACCINATION WITH LIPOSOMES



WO 97/30158

GUTHMANN ET AL (703) 413-3000

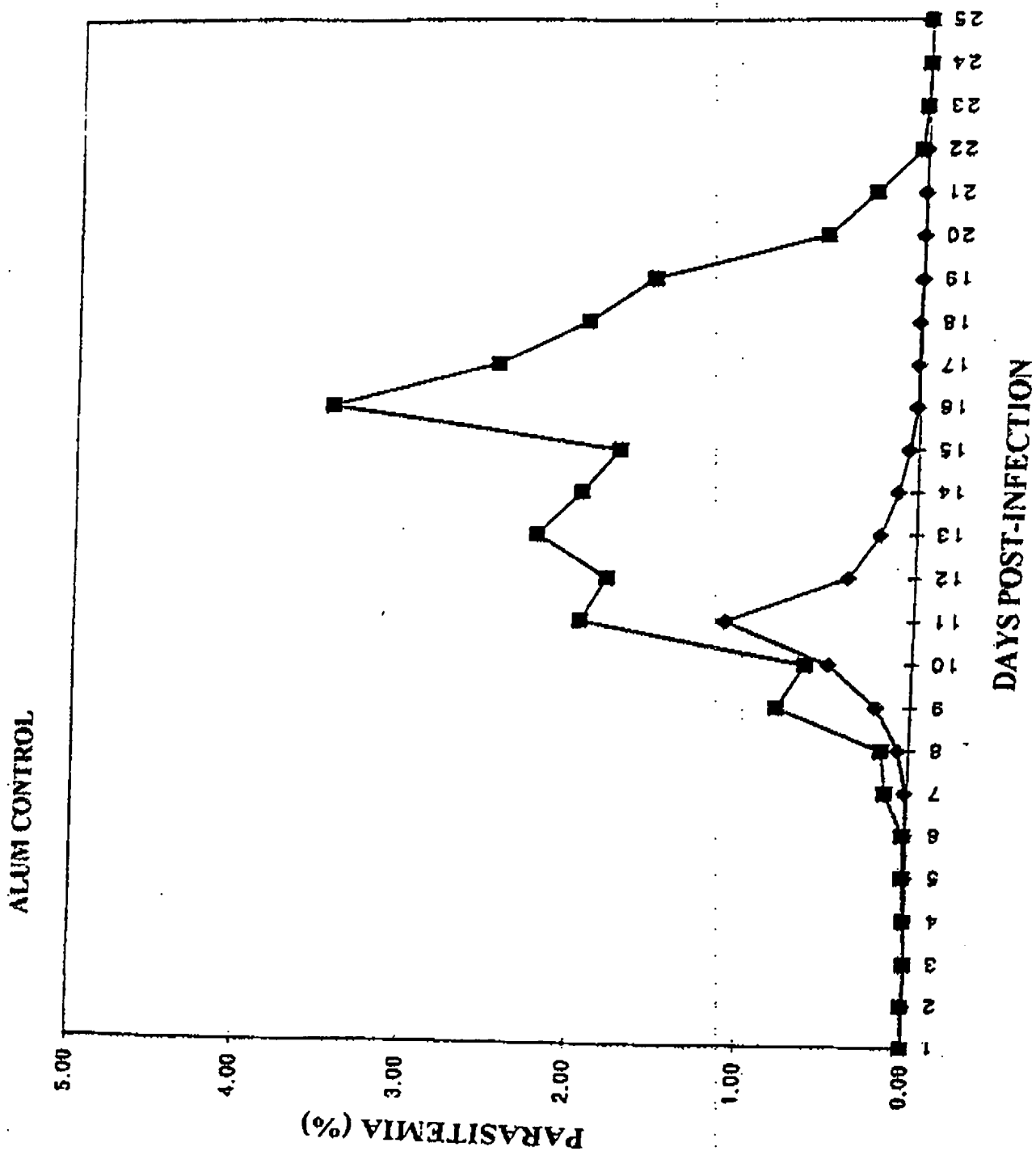
DOCKET 0139014 SHEET 29 OF 32

PCT/FR97/00290

29/32

09/125031

FIGURE 100

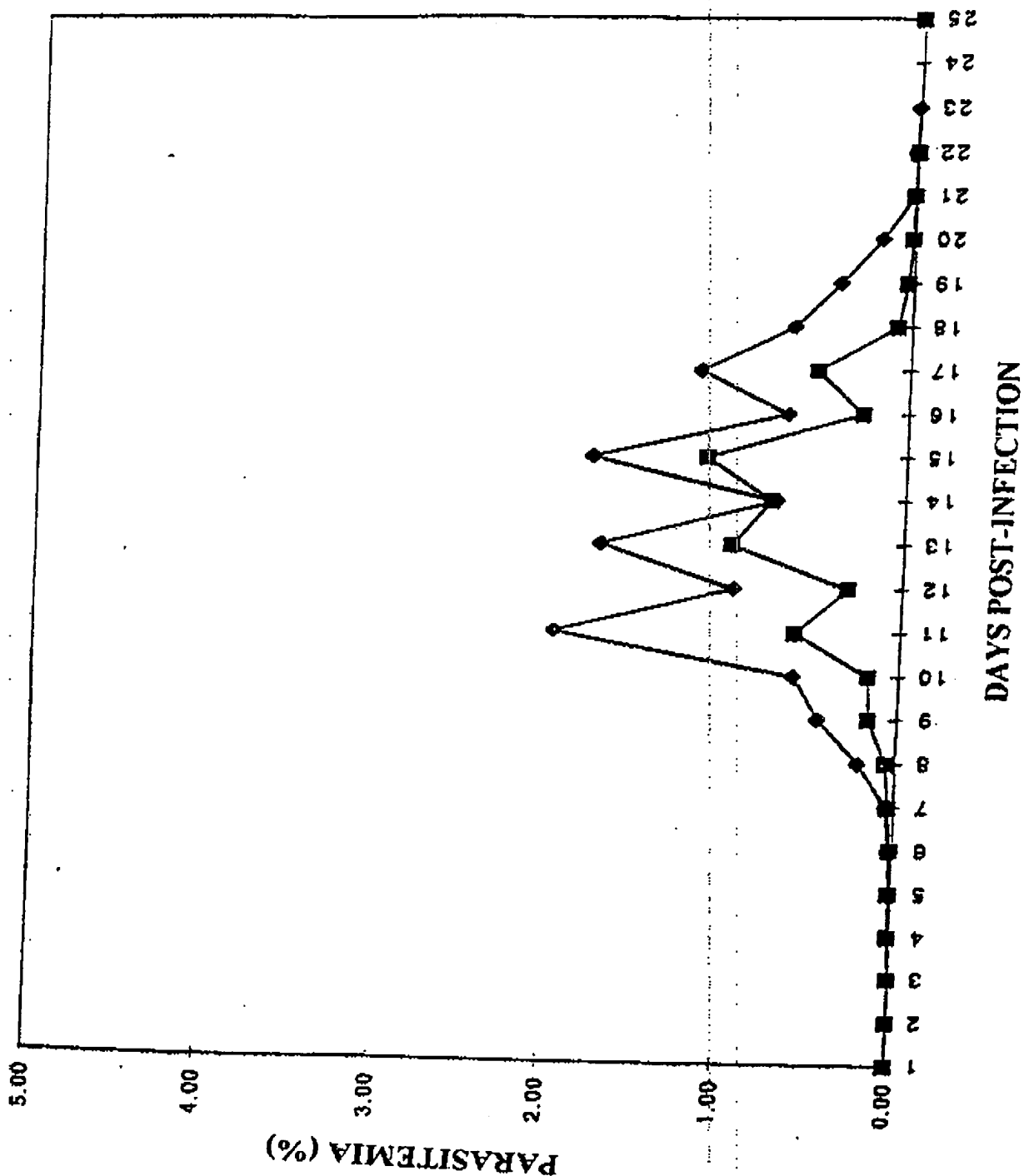


09/125031

FIGURE 10E

PLASMODIUM FALCIPARUM VACCINATION TEST IN SAMIRI
SCIUEREUS SQUIRREL MONKEY

FREUNDS CONTROL



WO 97/30158

ET AL (703) 413-3000

SECRET 01390XP

SHEET 31 OF 32

PCT/FR97/00290

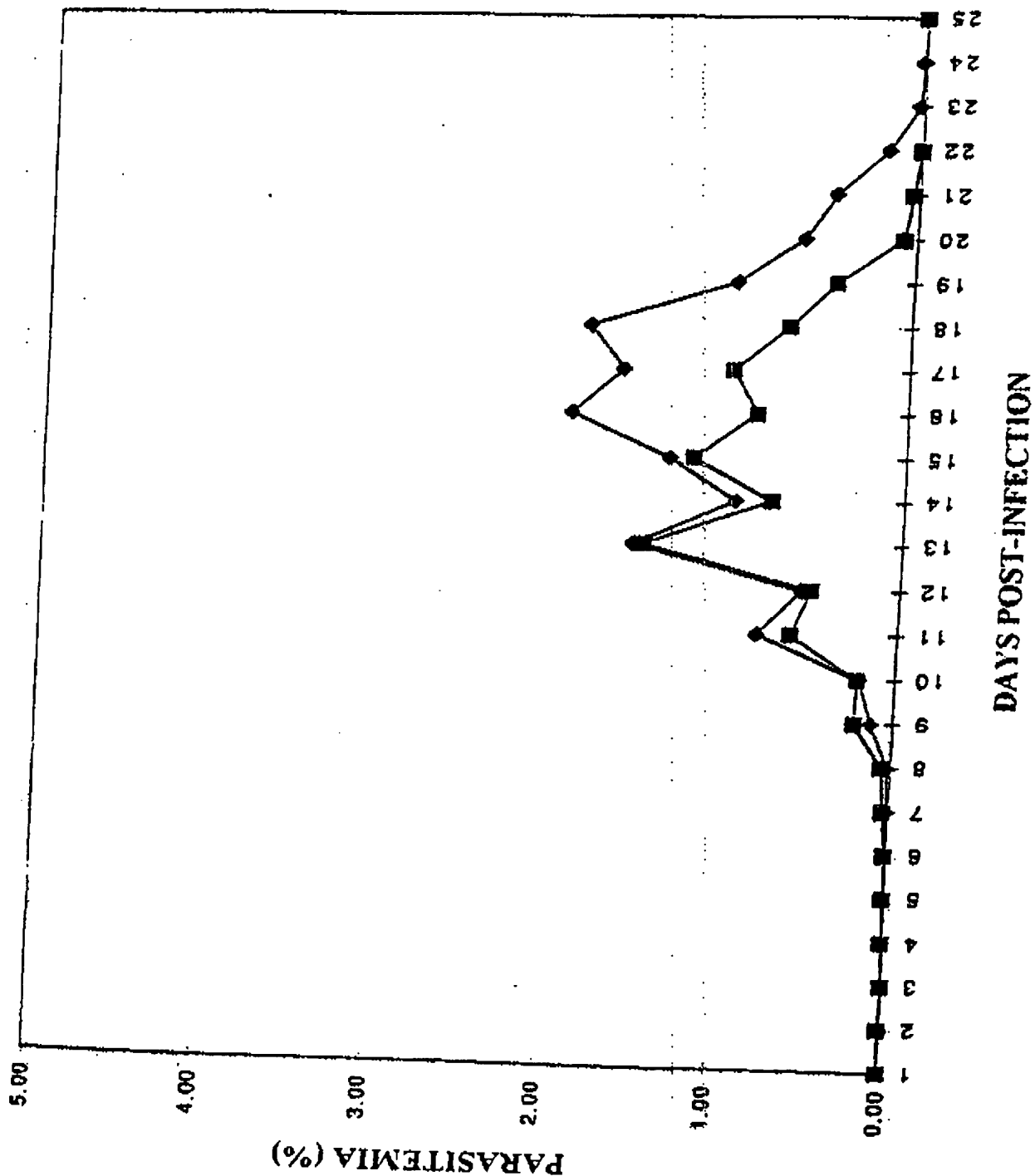
31/32

09/125031

Lip Control-37
 Lip Control-73

FIGURE 10F

PLASMODIUM FALCIPARUM VACCINATION TEST IN SAMIRI
 SCIUREUS SQUIRREL MONKEY
 LIPOSOME CONTROL



WO 97/30158

ET AL (703) 413-3000

DOCKET # 81390XPU SHEET 32 OF 32

PCT/FR97/00290

32/32

09/125031

FIGURE 106

PLASMODIUM FALCIPARUM VACCINATION TEST IN SAIMIRI
SCIUREUS SQUIRREL MONKEY
PHYSIOLOGICAL WATER CONTROL

